

TO 2100 5222360

DATA STORAGE SYSTEM

100

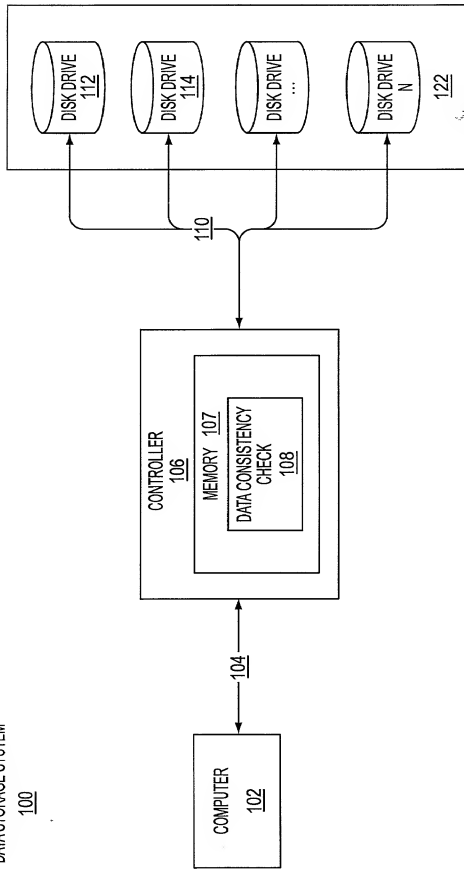


FIG. 1

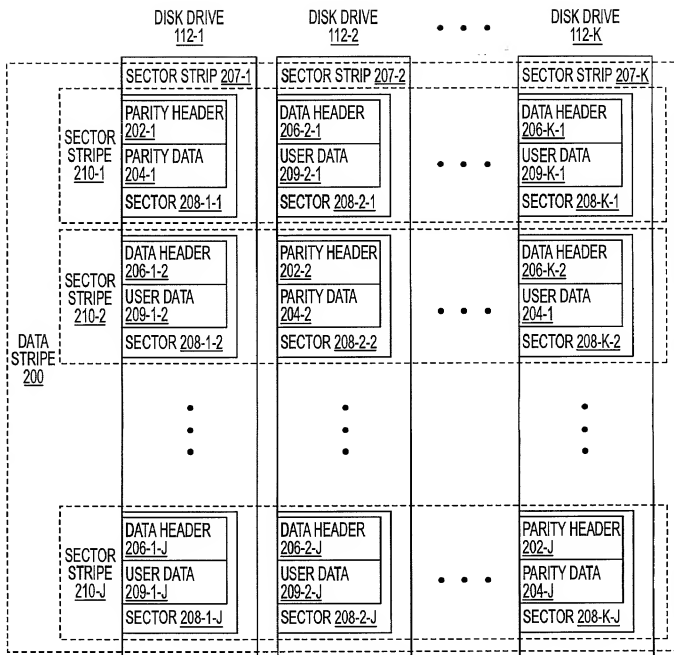


FIG. 2

FIG. 3

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graph TD
    START((START)) --> 302[READ ALL SECTORS OF DATA STRIPE]
    302 --> 303[SELECT FIRST OR NEXT SECTOR STRIPE]
    303 --> 304[CALCULATE DCCss]
    304 --> 306{IS CALC. DCCss EQUAL TO STORED DCCss FOR SELECTED SECTOR STRIPE?}
    306 -- YES --> 307{ARE THERE MORE SECTOR STRIPES?}
    307 -- YES --> 303
    307 -- NO --> 309{DID CORRECTION OCCUR?}
    309 -- YES --> 310[WRITE DATA STRIPE]
    310 --> 311((END))
    309 -- NO --> 313[LOG NO CORRECTION]
    306 -- NO --> 313
    
    313 --> 315
    subgraph 315 [ ]
        324{ANY ERRORS DETECTED IN THIS SECTOR STRIPE?}
        324 -- YES --> 325{IS THERE AN ERROR WITH A SECTOR DCCdc OR DCCps?}
        325 -- YES --> 326{IS THERE A SINGLE ERROR WITH DCCps OR DCCds THAT CAN BE CORRECTED?}
        326 -- YES --> 333[LOG CORRECTION]
        326 -- NO --> 313
        324 -- NO --> 313
    end
    
    313 --> 316
    subgraph 316 [ ]
        327{IF ERROR IS A DATA SECTOR?}
        327 -- YES --> 328["1- REGENERATE USER DATA FROM REMAINING USER DATA AND GOOD PARITY; AND 2- GENERATE NEW DCCds"]
        327 -- NO --> 331["1- GENERATE NEW PARITY FROM GOOD USER DATA; AND 2- GENERATE NEW DCCps"]
        328 --> 330[GENERATE NEW DCCss FROM NEW DCCds AND NEW DCCps]
        331 --> 330
    end
    330 --> 304

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FIG. 4

400

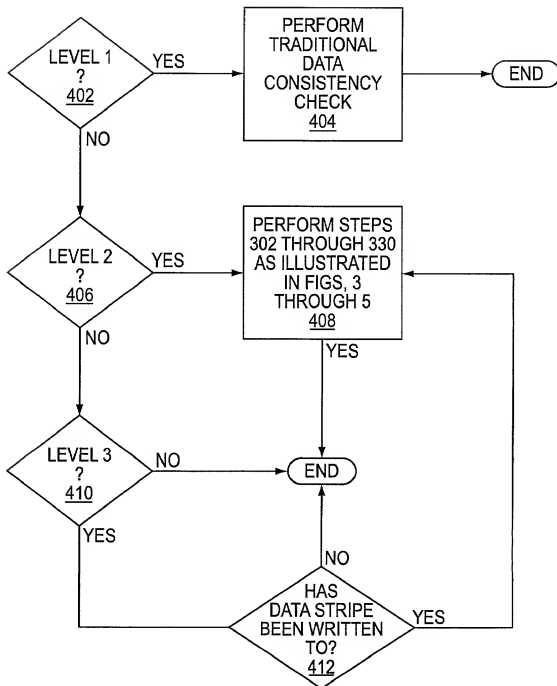


FIG. 5